

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
28 August 2003 (28.08.2003)

PCT

(10) International Publication Number
WO 03/070467 A2

(51) International Patent Classification⁷:

B41J

(74) Agents: GARRATT, Peter, Douglas et al.; Mathys & Squire, 100 Gray's Inn Road, London WC1X 8AL (GB).

(21) International Application Number: PCT/GB03/00739

(22) International Filing Date: 20 February 2003 (20.02.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

0204010.3 20 February 2002 (20.02.2002) GB

(71) Applicant (for all designated States except US): XAAR TECHNOLOGY LIMITED [GB/GB]; Science Park, Cambridge CB4 OXR (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): TEMPLE, Stephen [GB/GB]; Xaar Technology Limited, Science Park, Cambridge CB4 OXR (GB). HARVEY, Robert [GB/GB]; Xaar Technology Limited, Science Park, Cambridge CB4 OXR (GB). ZMOOD, Ronald [AU/AU]; PO Box 1015, Caulfield North, VIC 3161 (AU). LOWE, Robert, Jonathan [GB/GB]; 37 St. Kilda's Avenue, Cambridge CB4 2PN (GB). DRURY, Paul, Raymond [GB/GB]; 8 New Road, Great Chishill, Royston, Hertfordshire SG8 8ST (GB).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

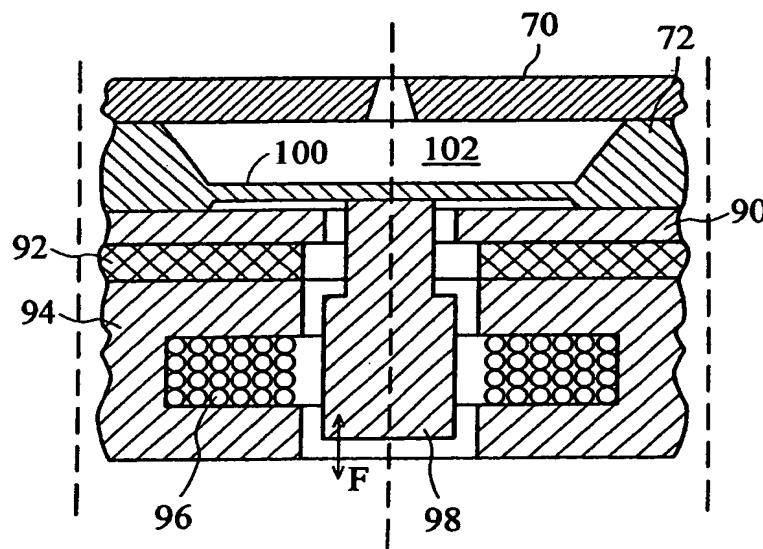
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: FLUID PUMPING AND DROPLET DEPOSITION APPARATUS



(57) Abstract: In fluid pumping apparatus suitable for use in drop on demand ink jet printing, a resiliently deformable chamber wall is acted upon to create acoustic waves, which in turn cause a fluid flow in a chamber outlet. The resiliently deformable chamber wall preferably comprises both rigid and flexible portions. In an alternative arrangement a channel wall is provided with a region moveable in an actuation direction. An electromagnetic actuator operates under the principle of flux modulation. The invention is preferably of planar construction, manufactured using MEMS techniques.

WO 03/070467 A2